

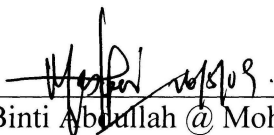
**DETERMINATION OF RIBOFLAVIN IN COMMERCIAL DRINKS
USING FLUORESCENCE SPECTROSCOPY**

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**Final Year Project Report Submitted in
Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science (Hons.) Applied Chemistry
Faculty of Applied Sciences
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MAY 2009

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ACKNOWLEDGEMENTS

First of all, I would like to express my big thanks to Allah Almighty for blessing me with strength to complete this CMT 679 course. Secondly, I would like to thank my supervisor Puan Mashita Binti Abdullah @ Mohd Noor for her firm guidance and generosity in giving me the advice and encouragement throughout my project work. My gratitude goes to my lectures and laboratory staff for their assistance and support to me as a student in Faculty of Applied Sciences. Lastly, I would like to thank my parents Encik Yusof Bin Mamat and Hasnah Binti Awang Ngah as well as my siblings for understanding and support throughout my student life in UiTM. I would like to thank also my friends who have directly or indirectly involved in helping me with ideas and constructive comments during the completion of this project.

Thank you,
Anida Yusof

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ABSTRACT

DETERMINATION OF RIBOFLAVIN IN COMMERCIAL DRINKS USING FLUORESCENCE SPECTROSCOPY

Determination of riboflavin in commercial drinks using fluorescence spectroscopy as well as effect of shelf life and nature of packaging were studied. Riboflavin content was determined using single excitation-emission spectra of fluorescence measurements. The excitation wavelength at 457 nm and emission wavelength at 520 nm were used in the detection of riboflavin in the samples. Standard solution and samples was analysed by fluorescence spectroscopy (Luminescence LS-50 Perkin Elmer). All analyses were carried out in triplicates. Calibration curve of standard riboflavin was used to calculate the concentration of riboflavin in samples. It was found that riboflavin determined in sample 1 (1.36 mg/100mL), sample 2 (0.04 mg/100mL), sample 3 (0.04 mg/100mL), sample 4 (0.05 mg/100mL) and sample 5 (0.05 mg/100mL) is less than riboflavin stated in sample 1 (1.93 mg/100mL), sample 2 (0.12 mg/100mL), sample 3 (0.13 mg/100mL), sample 4 (0.12 mg/100mL) and sample 5 (0.12 mg/100mL) on the label nutrition information. As we know riboflavin is sensitive to light and easily degrade when exposed to light. When in contact with oxygen, riboflavin also degrades. All samples analysed claimed to contain riboflavin as stated on the label of the packaging. Exposed to light during storage and transportation before use, natures of packaging and shortest shelf life are the factors that contributed to degradation of riboflavin. Longest shelf life the riboflavin remains in sample is highest and shortest shelf life lowest riboflavin remains. So from the study consumer can be aware with the commercial drinks because close to expiry date the riboflavin might degrade and less than stated on label.